

Summary Report of West Nile Virus Surveillance Activities, 2000

During 2000, the West Nile virus (WNV) surveillance system in Rhode Island consisted of three components; wild bird testing, mosquito testing, and human case surveillance. This surveillance system was operated through a cooperative agreement between the Centers for Disease Control and Prevention, the Rhode Island Department of Environmental Management, and the Rhode Island Department of Health, Divisions of Health Laboratories, and Disease Prevention and Control. Below is a brief summary of the activity conducted during the year 2000 (May-December).

BIRD SURVEILLANCE

Methods:

Dead bird testing was initiated in 2000 for the first time in Rhode Island. In early April, 2000, a letter (and instructional brochure) was mailed to veterinarians, wildlife rehabilitators, the Audubon Society, and several other groups, soliciting their assistance with the dead bird surveillance program.

By early May, a dead bird surveillance program was established, headquartered in the Mosquito Abatement Control (MAC) Office. The vast majority of the more than 3,000 phone calls to the advertised hotline were from the public. The remainder was from the groups noted above and from animal control officers. The Bird Surveillance Coordinator screened out some 2,000 calls because the birds did not meet the testing criteria. Two seasonal employees hired for that purpose retrieved a total of 936 birds. Birds were necropsied at the Dept. of Health laboratory, and subsequently tested at an Univ. of RI BL3 laboratory.

Results:

The Rhode Island WNV database received 1466 reports of dead birds from all 5 counties. 356 birds were tested for WNV with 88 birds (70 crows, 18 blue jays) testing positive for WNV.

- Of the 88 positive birds, 79.5% were American crows.
- The positive birds were reported from 4 counties: Kent (13; 14.8%), Newport (10; 11.4%), Providence (2; 2.3%) and Washington (63; 71.6%). Refer to Figure 1.
- The first positive bird was reported on August 14 2000 and the last positive bird was reported on November 20, 2000.

In addition, EEE was isolated from 1 crow, 1 raven, 1 bluejay, and 1 sparrow. HJ virus was isolated from 2 sparrows.

MOSQUITO SURVEILLANCE

Methods:

An average of 26.5 mosquito traps were set weekly throughout Rhode Island during a nineteen week trapping period from May – September, 2001. The majority were CO₂-baited CDC light traps. Supplemental gravid traps were set in suspected Culex habitats, principally in urban environments. CDC traps were set near select locations near WNV-positive bird locations during the latter part of the season. Mosquito traps were not set at crow rookeries, as attempts to locate them were unsuccessful.

Results:

A total of 1,113 pools were tested, yielding one EEE isolation, six HJ isolations, and no WNV isolations. Importantly, no mosquitoes tested positive for West Nile Virus. The breakdown by counties is as follows:

County	Number of mosquitoes	Percent overall
Bristol	8	0.07
Kent	330	3.1
Newport	1654	15.3
Providence	495	4.6
Washington	8291	76.9%

HUMAN SURVEILLANCE

Methods:

Arboviral encephalitides are reportable events in RI through a physician and laboratory based passive surveillance system. Anticipating the arrival of WNV in the summer of 2000, the system was enhanced through the publication of health alerts to all licensed physicians, licensed clinical laboratories and infection control practitioners in the

state. The alerts outlined a surveillance case definition, appropriate laboratory specimens to collect and the availability of the state laboratory as a resource for testing. Recommendations were made to report all cases of encephalitis immediately on suspicion of diagnosis. Written alerts were reinforced at Brown University sponsored Infectious Disease and Medical Grand Round presentations at and at the monthly meetings of regional infection control practitioners. They were also posted on the Department's web-site.

In addition, samples of CSF from 48 hospitalized cases of aseptic meningitis were collected from three cooperating hospital laboratories between May and October.

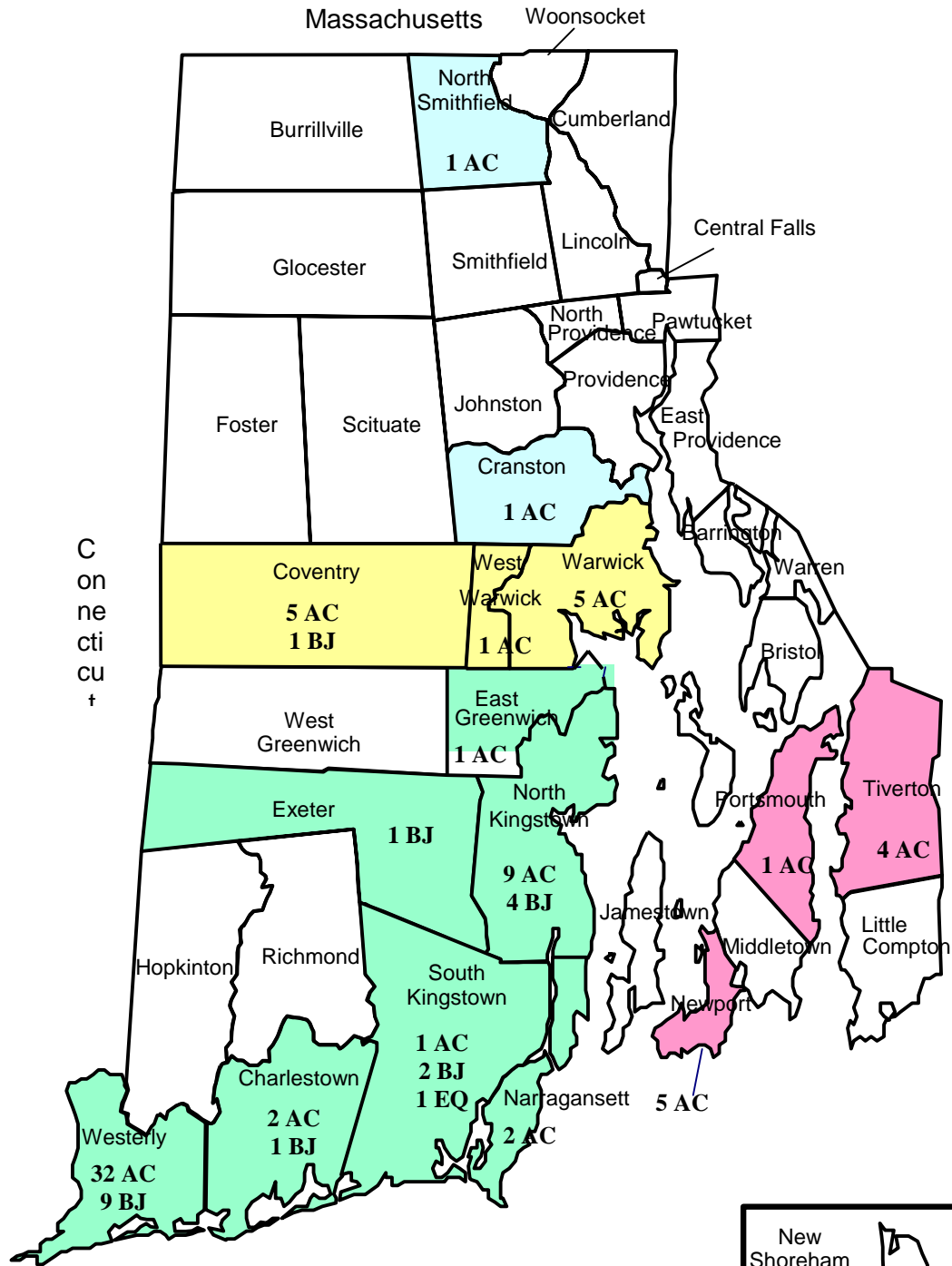
Results:

Four cases that met the surveillance case definition for encephalitis were reported, from May through October. CSF and serology on these cases were negative for WNV on these cases. In addition 38 CSF specimens from cases of aseptic meningitis were tested and all were negative. 10 other specimens were not tested because the quantity was insufficient. Thus, no case of West Nile virus in a Rhode Island resident was identified in 2000.

VETERINARY SURVEILLANCE

Results: One equine tested positive for West Nile Virus in September. The positive result came from a horse stabled on Saugatucket Road in Wakefield that was euthanized at Tufts University School of Veterinary Medicine in Massachusetts on August 28. Tests were performed and confirmed by the National Veterinary Services Laboratories in Ames, Iowa for the United States Department of Agriculture.

Figure 1: West Nile Virus Positive Avians, 2000



AC--American Crow
BJ-Blue Jay
EQ-Equine

